

St. Bartholomew's Hospital



JOURNAL.

VOL. II.—No. 18.]

MARCH, 1895.

[PRICE SIXPENCE.]

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St. Bartholomew's Hospital Journal,

MARCH 14th, 1895.

"Æquam memento rebus in arduis
Servare mentem."—*Horace*, Book ii, Ode iii.

Notes on Aseptic Surgery.

By C. B. LOCKWOOD, F.R.C.S.,

Assistant Surgeon to the Hospital.

(Continued from page 69.)

THE catgut* which is sometimes used for ligatures and sutures is, without strict and careful preparation, a dangerous source of infection. Nevertheless it has such incontestable advantages for many purposes that its use is not likely to die out. On the contrary, as our methods of preparing it improve it is likely to enjoy a wider popularity.

Catgut is made from the entrails of sheep. In the process of manufacture the mucous membrane and most of the circular muscle-fibres are scraped away. Nevertheless it is highly improbable that all the intestinal bacteria are removed. Indeed, there is much evidence to the contrary. Moreover the intestinal walls may themselves be infected. Volkmann has described two cases of anthrax after am-

* Those who are interested in this topic will find the fullest information in Brünner's paper, "Ueber Catgut infektion," *Beiträge zur klinische Chirurgie*, Tübingen 1890, vol. vi.

putation of the breast. He attributed these to the catgut used for tying the vessels. Volkmann's evidence, however, leaves much to be desired. Kocher, however, and others have described cases which leave no doubt as to the dangers of catgut infection.

Zweifel saw septicæmia follow its use, and Mosetig von Moorhof lost patients from suppuration around omental and ovarian pedicles which had been tied with it.

Five or six years ago catgut soaked in carbolic oil was used for wounds. I found that most samples of this material infected nutrient gelatine. Reverdin and Massol* found that raw catgut always infected gelatine or agar-agar. Colonies also grew after it had been soaked in oil of juniper or alcohol. Zweifel found masses of bacteria between the lamellæ of catgut, some of which had been used for operations; but, as Brünner says, these may have been dead. In sections of catgut made with the microtome Brünner saw quantities of bacilli and cocci.† This author obtained growths of bacteria from most specimens of catgut prepared with carbolic oil, juniper oil, or chromic acid. Macpherson‡ also found that many specimens of sulphuro-chromic gut infected culture media.

White silk, such as is used for sutures and ligatures, passes through a process of manufacture which tends to ensure sterility. Macpherson§ says, "The silk threads are 'thrown' in China and Italy (chiefly in Milan), and come into this country coated with the dried viscid material of the cocoon, or, as it is technically called, in the gum. The processes to which these threads are subjected in English manufactories have in view the removal of the gum, which is a valuable mordant, and the production of a thread as pure and white as possible. The gum is removed by boiling, and the threads are afterwards washed with the best curd soap. The soap is then removed by 'the process of stoving,' i.e. placing the threads for six to twelve hours in sulphur kilns. Finally, the threads are bleached by one or other

* *Antisepsie et Asepsie chirurgicales*, p. 131.

† Loc. cit., p. 148.

‡ "Antiseptic Preparations of Catgut and Silk," *Medico-Chirurgical Transactions*, vol. lxxv, 1892, p. 227.

§ Loc. cit., p. 234.

of the patent bleaching powders. 'Surgical' silk, which is the whitest silk obtainable, and more resistant than inferior qualities to the action of heat, is subjected twice to the process of 'stoving.'"

As Macpherson says, boiling, stoving, and bleaching are powerful germicidal processes.

But although great care is taken to keep silk as clean as possible, it is usually infected before it reaches the surgeon. Macpherson grew bacteria which liquefied gelatine from silk in a surgeon's pocket case. Silk lying about a sitting-room also gave a growth. Carbolised silk from instrument makers usually infected culture media. Generally speaking, unprepared silk came exceedingly well out of its trial, and has not many of the dangers of catgut.

The human skin and its appendages teem with bacteria. Nearly every species is represented—cocci, sarcinæ, saccharomyces, moulds, and bacilli abound in cultures inoculated with scrapings of the normal skin. Those who are interested in this subject will find an exhaustive list in Eisenberg's indispensable work,* in the writings of Unna and his fellow-workers,† and in Mr. Damman's essay.‡

The bacteria abound in normal skin, and their numbers and varieties are increased in disease. For some years I have tested the skin of persons operated upon by cutting off a piece of skin and placing it in nutrient broth. Although the most determined efforts had been made to disinfect this skin, I have grown from some specimens of it *Staphylococcus pyogenes albus*, *Streptococcus pyogenes*, *Staphylococcus pyogenes aureus*, *Sarcina lutea*, *Bacillus epidermidis*, *Staphylococcus epidermidis albus*, and *Diplococcus epidermidis* (the microbe which produces the acrid and offensive odour). From scrapings of healthy skin, in addition to the long list which Eisenberg gives, I have separated *Micrococcus roseus*.

In some diseases of the skin—eczema, for instance—bacteria are more numerous, and in other diseases special kinds are found. The *Streptococcus* of erysipelas and the tubercle bacillus have a not infrequent influence upon the results of operations.

The presence of quantities of bacteria in healthy skin throws doubt upon observations which show their presence in certain diseases. Nevertheless it may be mentioned that in a case of pyæmia Von Eiselsberg§ found that *Staphylococcus pyogenes aureus* was present in the osteomyelitis of the femur, in the blood, in the metastatic abscesses, and, lastly, in the sweat of the forehead.

Mr. Tubby,|| in examining sections of skin from a case of acute suppurative periostitis, found the sweat glands more dilated than usual, and crowded with micrococci.

* *Bakteriologische Diagnostik*.

† *Monatsshefte für praktische Dermatologie*, vol. vii, p. 817, and vol. ix, 1889, p. 50, and elsewhere.

‡ "Preliminary Note on some Micro-organisms of Normal Skin," *British Medical Journal*, July 16th, 1892, p. 122.

§ "Nachweis von Eiterkokken im Schweisse eines Pyämischen," *Berliner klin. Wochenschrift*, 1891, No. 23.

|| "The Pathology of Acute Infective Periostitis," *Guy's Hospital Reports*, vol. xlvii, 1890, p. 77, &c.

In sections of healthy skin I had no difficulty in seeing cocci, diplococci, and bacilli in the epidermis and in the mouths of the hair-follicles. Sebaceous matter, squeezed from a sebaceous gland and made into a cover-glass preparation, is a mass of cocci, diplococci, and bacilli, with occasional epithelial-cells. After an area which had numerous sebaceous glands had been washed with soap and water, then with perchloride of mercury lotion, 1 in 1000, and lastly with absolute alcohol, its glands were squeezed and cultures inoculated from its surface. The result was a plentiful growth of long and short bacilli, leptothrix, monococci, diplococci, and staphylococci. A perspiring surface was cleansed in the same way, and as soon as the sweat reappeared nutrient material was inoculated with it, and grew quantities of staphylococci, and, in old cultures, some bacilli and leptothrix. It is interesting to note that the sweat gave a growth of cocci with few bacilli, whilst sebaceous matter gave bacilli with few cocci.*

The fissures beneath the nails are the special homes of bacteria. I have grown from a bit of nail what I believe to be *Streptococcus pyogenes*, and on another occasion *Staphylococcus albus*. In both cases a determined effort had been made to disinfect beneath the nails, and it would be interesting to learn what bacteria reside beneath the nails of uncleanly people. I do not believe it possible to disinfect the nails except by cutting them as short as possible.

The relation of the bacteria of the skin to suppuration still requires elucidation. Since I have learnt to look upon the skin as a source of infection, and since so much pains have been taken to disinfect it, suppuration has been exceedingly rare. In such complicated and difficult cases as those of radical cure of hernia our proportion of suppuration is 10 per cent., and a serious sepsis has never occurred. Perhaps the adjective *pyogenes* ought not to be added to some of these skin bacteria until they have been definitely proved to possess the power of causing suppuration. Nevertheless I have found cultures of bacteria from the skin decidedly pathogenic for white mice, and occasionally for rabbits.

In rabbits I found that a fatal result usually followed the injection of a fluid composed of skin scrapings suspended in normal saline solution into the auricular vein. Some rabbits died at once—killed, perhaps, by the coarse particles; others died some days or weeks afterwards. Gelatine cultures inoculated from the same kind of fluid, made of normal saline solution and skin scrapings, soon became liquid, and contained a great many kinds of microbes—cocci of various sizes, diplococci, staphylococci, chains of from four to twelve cocci, some chains consisting of large, others of small elements, numbers of very small short bacilli aggregated into small groups, a larger spore-containing bacillus with rounded ends, and leptothrix. The liquefied gelatine which contained these

* Most of these notes upon bacteria in the skin are from my "Report on Aseptic and Septic Surgical Cases, with special reference to Infection from the Skin," *British Medical Journal*, May 28th, 1892; and from my "Report on the Disinfection of Skin," &c., *British Medical Journal*, January 27th, 1894.

bacteria seemed more virulent than a mere solution of skin scrapings. An intra-venous inoculation of five to ten drops soon made rabbits ill; and when they died their lungs were usually inflamed and engorged, especially near the periphery.

When cultures which had been inoculated with the contents of sebaceous glands were introduced into the subcutaneous tissues of mice, they killed the animals in three or four days, causing œdema, suppuration, and ulceration, with loss of hair. These cultures had the peculiar disagreeable odour possessed by the contents of sebaceous retention cysts.

The cultures with which these experiments were done contained several kinds of bacteria. Much remains to be done before we shall know the effects of pure cultures. Then it will probably appear that some kinds are harmless and others harmful in different degrees.

I have made a few experiments in this direction, and found that pure cultures of *Bacillus epidermidis*, cultivated from skin scrapings and separated by the method of plate cultures, had the same effect upon mice as mixed cultures.

Small doses of pure cultures of *Diplococcus epidermidis albus* may be injected into the veins of rabbits without apparent injury. There is usually redness and slight suppuration at the seat of inoculation. A larger dose injected into the cellular tissues causes inflammation and œdema with some purulent infiltration. The *Diplococcus* (or *Staphylococcus*) *epidermidis albus* was common in those cases of slight subacute suppuration which used to occur more often than they do now. In some cases plate cultures showed that the micrococcus was mixed with *Bacillus epidermidis*. Now and then the discharges from wounds contain a micrococcus which has a disagreeable acrid odour, observed when uncleanly people remove their vestments. The bacteria of the skin are often found in the vicinity of wounds which have healed by primary union, and with none of the usual signs of inflammation. My belief is that in these cases the bacteria have emerged from the depths of the sweat and sebaceous glands after the wound in the skin has adhered.

It is a pure assumption that these skin bacteria are the cause of slight subacute suppuration, but, as I have said, as the bacteria have been eliminated by cleansing the skin, the suppuration has ceased to occur. Moreover, skin which contains one kind of microbe may contain another. Safety is attained by excluding all.

One of our cases of suppuration was very instructive. The patient was not very well before the operation, and a bit of her skin cut off at the operation and dropped into broth grew a pure culture of *Staphylococcus pyogenes aureus*. The wound suppurred, and the pus contained the same microbe.

This plan of cutting off a bit of skin and dropping it into broth is one of the best ways of testing the disinfection

of skin. Sometimes it is tested by putting scrapings into nutrient material; at others by merely dabbing the fingers upon plate cultures of gelatine or agar-agar, or by dipping them into broth.

The inoculation of a wound through the patient's own blood-stream may occasionally occur. It is, of course, very difficult to obtain satisfactory evidence upon this point. Reasoning from analogy, its occurrence is quite possible. I have before me the notes of a case of suppuration which followed a simple fracture of the ulna in an apparently healthy schoolboy. It would be easy to collect similar examples. It is now one of the commonplaces of pathology that bacteria are carried by the blood-stream from septic wounds to the internal organs—as, for instance, in pyæmia, and, I might add, in septicæmia. Some years ago I cut down upon a median nerve which had been involved in a scar. The boy seemed perfectly well, and his wound painless and apparently healed. One day he was seized with a diphtheritic sore throat. He became ill, and the wound in his arm suppurred. The experiments of Rosenbach, Wyssokowitsch, Kocher, and others have shown that injured tissues arrest bacteria which are circulating in the blood.

Thus auto-inoculation of wounds may occasionally occur. It is, however, too rare to afford a plausible excuse for bad results. Before describing the methods by which instruments, sponges, towels, skin, and so forth are disinfected, I would like to refer again to a question which naturally arises, and is often asked, viz. why, if bacteria are so wide-spread and so harmful, does any one survive an operation in which asepsis is not secured? To answer this would require a discussion of the great and growing question of immunity. This would be quite beyond the scope of these notes. The natural immunity which some species of animals enjoy, and the immunity which they acquire or have imparted to them, have all been briefly referred to. Vaccination against the smallpox is an example of acquired or artificial immunity, and to it may be added vaccination with the antitoxins of tetanus and diphtheria.

But the most important branch of this subject to surgeons is that which deals with local immunity. In describing *Staphylococcus pyogenes aureus* I said that the peritoneum was immune against small doses of that microbe, but that the immunity was lost if the integrity of the serous membrane had been destroyed by exposure to air, to the action of chemicals, tearing or laceration, or by bruising. Similar principles apply to the other tissues, and their bearing upon the practice of surgery is too obvious to call for comment.

But this resistance of the healthy living tissues to bacterial invasion cannot be relied upon. It is a thing beyond the control of the surgeon, whilst asepsis is not. No one would exchange a certainty for an uncertainty.

(To be continued.)

Notes on Paralyses of the Upper Extremity.

By H. LEWIS JONES, M.D.,

Medical Officer in charge of the Electrical Department.

SO many important cases of paralysis affecting the muscles of the upper extremity have come under observation in the electrical department, that I propose to lay before the readers of the *Journal* some notes on a few of the most interesting.

Perhaps the most instructive are those in which either a single muscle or a small group of associated muscles are affected, because the recognition of the real state of things, and the localisation of the position of the lesion, afford so useful an object-lesson in applied anatomy. I shall therefore begin by considering affections of single muscles, and shall return later to the more extensive paralysis of the upper limb.

A very considerable number of cases of paralysis of the muscles of the upper limb are due to injuries of the nerve trunks; progressive muscular atrophy, infantile paralysis, lead-poisoning, and disease of the cervical spine accounting for most of the others.

The Trapezius and Sternomastoid.—Paralysis of the trapezius is not a very common thing; it occurs most often, perhaps, in the course of progressive muscular atrophy. It is interesting because of the diagnostic signs which it affords, and which are represented in the photographs which accompany this paper. When the trapezius is paralysed there is a general feeling of weakness about the shoulder, and complaint of myalgic pains, because the muscle plays so large a part in supporting the shoulder during the movements of the upper limb. If the trapezii be watched and studied in persons who have the neck and shoulders bare—and for this many opportunities present themselves to those who frequent evening assemblies—it will be seen that these muscles are in almost continual action during movements of the arms, and, indeed, much of the beauty of the contours of the neck and shoulders depends upon the good development of the trapezii.

When one trapezius is paralysed the difference between the two shoulders can easily be recognised, particularly if the muscle be wasted as well, as generally happens. On the affected side the point of the shoulder is lowered, and the line from the neck to the shoulder-tip is hollowed. This difference is well seen with the arms hanging at the sides (Fig. 1). The position of the scapula is also changed, for the inner border of the bone does not lie parallel to the vertebral column, as in health, but at an angle with it, its upper corner being rather further from the middle line, and its lower angle rather nearer, at a higher level and more prominent. Duchenne has explained why this is the case. The shoulder, having lost the support of the upper part of the trapezius, hangs as it were suspended by its upper angle from the *levator anguli scapulae*, and turning,

as on a pivot, at the point of attachment of that muscle, its lower angle is tilted inwards and upwards, and the acromion sinks downwards by the weight of the arm.



FIG. 1.—Paralysis of left Trapezius.

If the patient be told to raise the arms to the head another peculiar defect comes into notice: namely, that the clavicle in its outer half comes into view from behind. This is a valuable diagnostic sign of atrophy of the muscle—one which, so far as I can learn, has not previously been pointed out. In healthy persons no part of the clavicle can be seen from behind when the arms are raised to the head, unless the observer's eye be at a considerably higher level than the patient's shoulders, for the part of the trapezius rising from the clavicle lies between and intercepts the view.

I have only had six cases of paralysis of the trapezius under observation. The first was in a boy, who was brought to the hospital by his father because his coat did not fit him, and the tailor pleaded, as his excuse, that the shoulder was deformed. Nothing had been previously noticed by the parents. His other muscles were in good order, but the left trapezius was extremely wasted. His sternomastoid was unaffected. Under electrical treatment the nutrition of the muscle gradually improved to a considerable extent. He was under observation for several months, but now, through his having changed his address, I have unfortunately lost sight of him. The case may have been one of neuritis.

In two other cases the paralysis was due to injury of the spinal accessory nerve, during a surgical operation for the removal of strumous cervical glands. In the first of these the incision was a small one, high up at the posterior border of the upper part of the sternomastoid. The nerve was carefully considered during the operation, and, as was thought, had not been divided. The wound healed very well; never-

theless, the muscle became wasted throughout its extent. A small band of fibres remained in the position of the

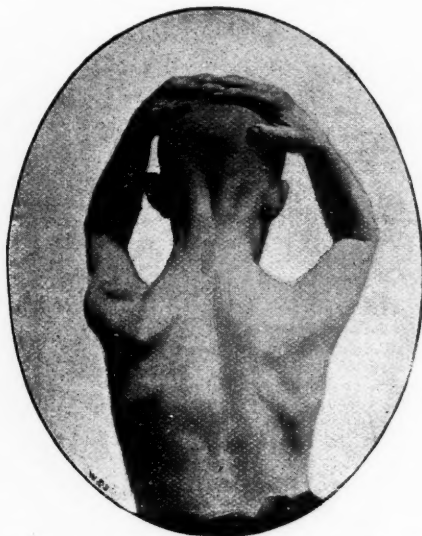


FIG. 2.—Paralysis of left Trapezius; clavicle seen from behind.

clavicular portion—the *ultimum moriens* of Duchenne—but in this, as in the rest of the muscle, there was a marked reaction of degeneration. The lower part of the muscle was probably not quite so much atrophied as the upper part, because the tilting upwards of the inferior angle of the scapula was not nearly so evident as in the illustration of the boy (Fig. 1). Still the case seems to show that the spinal accessory nerve plays a predominant part in supplying the trapezius, and that the other nerve supplies, *i. e.* the “nerve to the trapezius” of the cervical plexus, and the branches of the dorsal spinal nerves which pierce the muscle in its lower part, are unable by themselves to maintain the nutrition of the muscle. This patient was under treatment for six months, and gained greatly in power, though the muscle is still weaker than its fellow. There was also at first some impaired sensation over the upper part of the scapular area.

Duchenne appears to have noticed cases with wasting of portions only of the trapezius, and he distinguishes between the upper or respiratory portion, the middle or elevator portion, and the lower or adducting portion of the muscle. He also expresses the opinion that the upper part of the muscle will not be completely paralysed unless its nerve from the cervical plexus is damaged as well as the spinal accessory. Some, if not all, of his cases occurred in the course of progressive muscular atrophy—a disease which does not often find its way to our electrical department. In the cases which I have seen it has been the rule to find the nutrition of the whole muscle affected, without much difference between the various parts.

Another similar case is now under treatment, but the

injury in this one is more extensive. The whole of the side of the neck is scarred, as the result of numerous strumous abscesses and of the surgical treatment for their relief. In her, both the trapezius and sternomastoid on the right side are extremely wasted, and the rhomboids are also in the same condition. The whole shoulder-blade is inclined to fall forward by the action of the pectorals, and when it is allowed to move forward in that way the absence of trapezius and rhomboids becomes evident, for the contours of the ribs can be plainly seen behind between the scapula and the spine. In spite of the extreme atrophy there still remain a few living muscular fibres in the trapezius, and it is just possible that they may in time be cultivated, so as to be of some use to the patient.

In two other cases the atrophy of the trapezius was of central origin, being associated with affections of cranial nerves. In one facial palsy and deafness of one ear co-exists with paralysis of the trapezius and sternomastoid. The disease came on gradually, and is now, to all appearances, stationary, and in the other—which I had an opportunity of seeing in Dr. Church's wards—the third cranial nerve was involved.

Disease of the cord (poliomyelitis anterior) causes atrophy of the trapezius. In the acute form—infantile paralysis—the muscle is not commonly affected, but in the chronic form—progressive muscular atrophy—it is very commonly.

In pseudo-hypertrophic paralysis it is said to be affected less than many other of the shoulder muscles; in idiopathic atrophies of the Landouzy-Dejerine type, affecting the face and shoulder muscles, it may be much wasted.

The Serratus Magnus.—Paralysis of this muscle is interesting, because the deformity which results from it is peculiar. The serratus magnus is supplied by the posterior thoracic nerve, which rises from the fifth, sixth, and seventh cervical cords, and runs down the side of the chest behind the brachial plexus to reach the muscle. The position of the nerve makes it liable to injury, especially in the side of the neck, and its independent course explains the reason why paralysis of the serratus magnus is frequently seen without any other muscle being affected at the same time. Occasionally the nerve to the rhomboids comes off as a branch from the first part of the nerve to the serratus, and therefore the rhomboids may be paralysed with the serratus magnus. In the first part of its course the nerve runs in the substance of the scalenus medius muscle.

The peculiar deformity which characterises paralysis of the serratus is easily recognised if looked for. When the patient is examined with the arms hanging down, the shoulder may seem natural, but if the patient be told to extend the arms horizontally in front of him, the posterior border of the scapula on the affected side becomes prominent, projecting like a ridge from the level of the back. In a healthy person the scapula remains flat and closely applied to the thorax during this movement; the function of the serratus magnus

is to hold the scapula, and especially its posterior border, closely to the side of the thorax. When the arms are extended in front, the action of the deltoid tends at the same time to throw the scapula backwards, and this is resisted by the simultaneous contraction of the serratus magnus. If the deltoid be paralysed as well as the serratus, the patient cannot extend his arm horizontally, and the deformity due to the paralysis of the serratus, cannot be brought out in the way just mentioned. In this case, if the shoulder be pushed back while the patient is told to resist, it may be found that the posterior border of the scapula can be more easily displaced on the side of the paralysis.

Paralysis of the serratus magnus is not uncommon, and I have notes of several cases which came on from injury. The following example will serve as an illustration of the usual history of such cases:—A man was using an iron bar as a lever by putting the end of the bar on his shoulder, and pushing upwards forcibly against it; he felt a pain, and soon afterwards he found that his shoulder began to "grow out." When he came under observation there was marked paralysis of the right serratus magnus, and the rhomboids were also affected, which made the characteristic deformity of the shoulder even more pronounced.

In two other cases the patients had suffered severe injuries, one having been crushed in a lift accident, in which he broke his forearm, and the other having been hurt by a heavy packing case, which fell upon him. Both of these, in addition to other injuries, had paralysis of one serratus magnus—the right. Indeed, all the cases of paralysis of the serratus magnus which I have seen have been on the right side, and in male patients, though I have notes of two cases which seem to have come on spontaneously in girls of eleven and twelve years old, and Duchenne quotes three cases also in young girls. These are probably all cases of idiopathic muscular atrophy of the shoulder muscles.

The muscle is also paralysed, sometimes from neuritis coming on apart from injury. Thus a man (Fig. 3) became ill with fever after the passage of a catheter. He had severe pains in the right shoulder, which afterwards became weak. On presenting himself in the electrical department he showed paralysis of the right serratus magnus. No other muscles were affected. I have notes of four other cases where the muscle became paralysed after typhoid fever.

The notion is sometimes entertained that the peculiar position of the shoulder-blade described above is due to dislocation of the latissimus dorsi from its position at the angle of the scapula. This view is erroneous.

The Rhomboids.—These are supplied by a special nerve, which comes off from the fifth and sixth roots. In common with the other muscles, whose nerves run a somewhat exposed course in the neck and shoulder, the rhomboids are liable to paralysis from injury. It is not usual to find them paralysed alone. When they are paralysed the posterior border of the scapula is less firmly placed than in

health, and the fingers can be introduced under the edge of the bone more easily than usual. If the trapezius be well

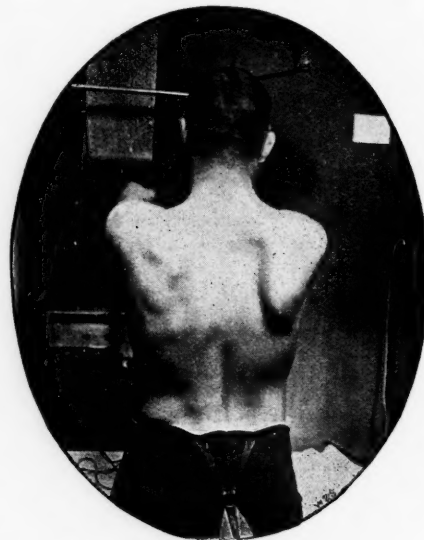


FIG. 3.—Paralysis of right Serratus Magnus.

developed, it is not very easy to make out the paralysis of the subjacent rhomboids by electrical testing.

The Scapular Muscles.—The supra- and infra-spinati are often paralysed, as the result of blows upon the shoulder, though less frequently than the deltoid.

When the spinati are wasted, the spine of the scapula becomes prominent, and the muscles themselves can be seen to be diminished in bulk. The patient is unable to perform external rotation of the humerus in a proper manner if the infra-spinatus is paralysed; and the other external rotator of the humerus, the teres minor, is often affected simultaneously though supplied by a different nerve. The movement of external rotation is necessary in writing for moving the hand across the page, and in sewing the same muscles also come into play.

The nerve (supra-scapular nerve) which supplies the spinati is exposed to the risk of injury, owing to its superficial position on the shoulder. The supra-spinatus is a much less important muscle than the infra-spinatus, and its condition is not so easy to determine, because it is thickly covered by the trapezius, which makes electrical testing of the muscle difficult, and its functions as an elevator and a weak internal rotator of the humerus can be completely performed by the other muscles. When the infra-spinatus is paralysed, it is usually extremely probable that the supra-spinatus is in the same condition.

The internal rotators of the humerus, namely, the subscapularis and teres major, have a nerve supply (the subscapular nerves), which escapes injury much more often than the spinati; and the same may be said of the latis-

simus dorsi, also supplied by a similar nerve—the long subscapular.

These muscles frequently escape, even in very severe injuries of the shoulder; the pectoralis major and minor also escape as a rule. There is a patient at present under treatment who has complete paralysis of all the muscles supplied by the brachial plexus, except the internal rotators, the latissimus dorsi, and pectorals, and similar cases are not uncommon, especially after serious dislocations of the humerus. I shall return later to consider the mechanism of these extensive paralyses after dislocations at the shoulder-joint.

(To be continued.)

Pathology in its Relation to the Study of Clinical Medicine and Surgery.

By A. A. KANTHACK, M.D.,

Lecturer on Pathology to St. Bartholomew's Hospital.



R. JONATHAN HUTCHINSON recently complained of a prejudice in favour of pathological methods in the diagnosis of disease, and bemoaned the neglect of clinical knowledge and experience.

This is an antithesis between clinical and pathological investigation which is to be greatly regretted. In our opinion the two methods should and do supplement one another, and where symptomatology leaves us in the lurch, the microscope, test-tube, platinum needle, and laboratory must come to our aid. The reason why the pathologist is now so frequently consulted is simply because the experienced physician and surgeon know that the most typical appearances and unequivocal signs are often deceptive. A diagnosis at times cannot be made without the more objective assistance of the laboratory. Innocent ulcerations turn out to be malignant and *vice versa*; tubercle bacilli are found where, from clinical evidence, they were not suspected. A limited experience at a large hospital like ours supplies us with numerous instances where diagnoses had to be corrected after complete histological or bacterioscopic investigation, or where a confirmation of a doubtful diagnosis seemed desirable. Pathology must proceed hand-in-hand with clinical knowledge and study. He who has learnt to apply laboratory methods to the requirements of ward work will fail less frequently than the man who considers himself to be a perfect clinician, either from faultless experience or from the conceit of mediocrity and ignorance. No doubt the importance of pathological or bacteriological methods may have been exaggerated, but that does not render them any the less justifiable. The physician or surgeon may diagnose an affection readily from physical signs or symptoms, but the inconceivable does happen at times, and he may have erred to his and the patient's disadvantage. Looking, therefore, at the question

from a sordid and mercenary point of view, the value of sound laboratory methods cannot be denied—they will often allow us to score over our hated rival.

Mr. Hutchinson objects particularly to the application of bacterioscopic examination to the diagnosis of diphtheria. No one doubts that diphtheria may be correctly diagnosed in most cases without it, but we also know that the clinical observation or guess often misleads. The bacterial examination is made essentially to confirm a probable or conjectured diagnosis, and the conditions and exigencies of sound criticism demand it. To us the somewhat hostile attitude assumed by the eminent surgeon seems strange and untenable.

The study of pathology in all its branches, including bacteriology, then, gives us additional means of recognising and checking our diagnosis. By study, however, we do not mean merely the handling of a platinum needle and a test-tube, section-cutting and staining, but a careful training in the methods of research and thorough instruction in science and theory.

Prognosis in clinical work is as important as diagnosis, and the merest tyro must see how many hints and facts the laboratory can reveal to us. In diseases of the blood the microscope gives us information which the most critical eye and the most highly-developed *tactus eruditus* are unable to disclose to our doubtful mind. In septicæmia and pyæmia the test-tube is of more value often than the thermometer. The surgeon makes frequent appeals to morbid histology.

There are those who object to morbid anatomy and histology as branches of pathology, and who would restrict the term "pathologist" to those only who practise physiological experiments. This is an entirely wrong view of the matter. Before we know what the diseased tissue-processes are in all their minuteness, we cannot hope to trace their causes. The physiologist must often investigate the normal function and properties of glands or organs by producing morbid conditions in the animal experimented upon. But because the result of an experiment is a morbid condition, the experimenter is not necessarily a pathologist. He simply applies a recognised form of inductive reasoning. The pathologist must acquaint himself with the anatomy and physiology of disease first, and, starting from a knowledge of physiological research, he must attempt to explain or reproduce the disease. Normal and morbid physiology, therefore, must often overlap, just as much as a normal and morbid anatomy. Morbid anatomy gives us the clue to the seat of lesion, and points out to us the direction our research should take, and without it the processes and progress of disease cannot be clearly understood. Moreover, it is a good and healthy check on our confident and cherished opinions—it confirms or flatly denies our observations made and recorded *intra vitam*, and calls forth a healthy scepticism without which there can be no inquiry.

Now, looking at pathology from the student's point of view—whose ambitions are rarely remote, and whose anxiety is chiefly his final examination—we do not hesitate to state that a thorough knowledge of pathology will assist him more than promiscuous reading. It enables him to guess and remember symptoms, and gives unexpected eloquence and learning to his answers. We do not say so because we wish to justify the existence of the Pathological Laboratory or wish to fill it—it is already inadequate to the needs of the numbers working there—but because we have benefited from this policy during our own examination years. This may not be a lofty ideal, but the average man does not dwell on giddy heights, and is satisfied with immediate success. He asks himself: “*warum willst du weiter streben*,” and despises a study which is its own reward. He will find that the study of pathology brings him ample compensation for his past troubles without increasing his responsibility.

Clinical Lecture on a Case of Pernicious Anæmia.

February 8th, 1895.

By SIR DYCE DUCKWORTH, M.D., LL.D.

I PROPOSE to-day to discuss the case of a woman who was admitted to Elizabeth Ward a few days ago, and who has, I regret to learn, died this morning. I believe that she suffered from that grave malady which is known as pernicious, or essential, anæmia—one that is, happily, not very common, but which, when we meet with it, always gives cause for great anxiety, for it too frequently has a fatal issue. Inasmuch, however, as some cases of this disease have yielded to treatment and recovered, it is important to recognise the symptoms of it, and to be ready to employ such remedial measures as have sometimes saved life.

Our patient was a native of Rhenish Prussia, and had been a governess in France and in this country. Last September she came to study horticulture at a college at Swanley. She was highly accomplished, and of a very nervous and energetic nature, and she worked with intensity at everything she undertook.

Her age was 36. Having no friends in England, and being obviously very ill, she was sent up to this hospital—reluctantly on her part—on January 31st, 1895.

She was a well-built, big woman, with fair hair. Her aspect was that of one who had become quite blanched by a copious hæmorrhage, and, in addition, there was a well-marked lemon-tint of skin all over the body.

In March, 1894, she had enteric fever in Paris, and was ill for four months, being left in very feeble health subsequently. She has suffered since from palpitation and dyspnœa. There is no history of any hæmorrhage. She stated that she had been subject to anæmia, as also had some of her sisters, and that she had taken iron in large quantities. The catamenia have been regular but with scanty flow. A sister told us that she had been quite as ill as at present last year, after the attack of enteric fever. The family history was unimportant, save in respect of the anæmic tendency in three of her sisters. There was no history of rheumatism or of ague.

On examination, there was present every sign and symptom of profound anæmia. The pupils were dilated but not very large; there was no appreciable œdema anywhere. The pulse was 128, regular, small, and of low tension. The heart's apex was in the fifth left space, a little outside the nipple-line. The impulse was diffuse and tremulous. The sounds varied from day to day, but the first one was sudden and short, accompanied by a soft murmur at the apex. The second sound was reduplicated all over the cardiac area, producing a cantering action. In the fourth left space a double shuffling sound was heard, apparently exo-pericardial. There were no basic murmurs, and no bruits in the jugular veins. The tongue was pallid, coated all over the

dorsum with a thick white fur. The abdomen was natural, and there was no enlargement either of the liver or spleen. There was occasional vomiting, and no desire for food. Sleep was broken, and there was much restlessness and general irritability. The urine was of sp. gr. 1014, and contained a trace of albumen. The temperature was raised for a few days to 101° and 102°, and fell subsequently. The cardiac murmurs varied somewhat from day to day, the first one appearing to be reduplicated, and a diastolic murmur became audible over the left ventricle, but not in the aortic area. The double shuffling murmur may have been endocardial and due to spasm. I have met with the like sometimes in profound anæmia. On the 3rd February the pupils were no longer large. On the 4th February I saw the patient first, and ordered arsenic, and opium was to be given to secure rest at night.

Examinations of the blood were made by Dr. Kanthack, Dr. Garrett, and the Research Clerk on this date, and the red globules were found not to form rouleaux, to be reduced to 171,000 per c.m., and to be irregular in shape. The hæmoglobin was reduced to 25 or 30 per cent. of the normal amount. The leucocytes were 21,000, or one to eight, being increased in proportion at this time. Most of these were polynuclear, and the nuclei stained with eosine. No increase was found in eosinophilous corpuscles, or in lymphocytes, and no nucleated red globules were seen.

The patient steadily became weaker. Arsenic was ordered in increasing doses, and marrow was prescribed, with beef-essence, eggs, brandy, and wine. Delirium set in with unconsciousness. The patient lay in a condition of coma vigil. The tongue became brown and dry, and the breath very fetid. The temperature gradually fell. Examination of the retina showed linear hæmorrhages and swelling of the optic discs. Death occurred rather suddenly from syncope on the 7th February.

Another examination of the blood made on 7th February showed an increase of red globules to 316,000, and a diminution of white cells to 10,285.

A review of the history and symptoms of this case led me to make a diagnosis of pernicious anæmia.

This disorder is no new one in norology. Cases of it have been noted from time to time during the last half century, both in Europe and in the United States of America.

Dr. Addison, of Guy's Hospital, had the merit, I believe, of first realising the peculiar features of this variety of anæmia, and it was while he was investigating the causes and nature of it that he stumbled upon cases of disease of the adrenal bodies, now known as Addison's, or bronzed skin, disease. As a matter of fact, neither Addison, nor anyone else since his time, has as yet unravelled the intimate nature of this strange and dreadful malady.

Its features are now familiar to us. We know that it occurs in both sexes, in middle life, and in persons of large frame with some tendency to obesity. The disorder comes on insidiously, with progressive pallor, weakness of muscles, dyspnœa, languor, tendency to nausea and vomiting, and a gradual lemon tint of the skin.

Patients thus affected sigh much and yawn. The tongue becomes dry, the breath fetid, the pulse rapid and jerky, and a tendency to small hæmorrhages sets in. Thus there may be epistaxis, purpuric spots on the limbs, and characteristic striated hæmorrhages into the retina. The optic discs may become swollen. In addition, there is commonly a peculiar irregular pyrexia, and the temperature may reach 104° or 105°.

The condition of the blood is very noteworthy. It was so in the case we are now discussing. Without any direct loss of blood, there is a gradual destruction, or failure of formation, of the red globules, which become singularly few, and may be reduced from the normal (4,000,000 to 5,000,000 corpuscles per cubic millimetre) to 316,000, as in this case. They cease to form rouleaux, and become altered in shape and appearance. Many strange forms may be witnessed, and some may be nucleated. There were none of the latter in this case, though the globules were irregular in shape. Pencil-cytosis is the name given to such a condition. The hæmoglobin also becomes greatly diminished. In this woman there was only 25 to 30 per cent. of the normal amount present. The white cells may be more numerous than in health. They were so here at one time, but later the number decreased. These leucocytes are also altered in character; they become polynuclear, and that was the special feature in this case. They showed minute granulations, which were stained with eosine. There were no eosinophilous leucocytes, and no myelogenic forms.

Without doubt, in these cases we have to deal with some grave defect in hæmopoiesis, but where the specific alteration occurs we do not as yet know.

The dead-house has so far revealed nothing. The changes found post mortem are mainly those dependent on a greatly impoverished condition of blood. Thus we find fatty degeneration of the heart,

liver, kidneys, and muscles. The fat is of a deep yellow tint, and the muscles very dark. The blood is pale and fluid. Atrophy of the gastric glands has been frequently noted, but is not peculiar to this disease.

It is a noteworthy clinical feature in cases of pernicious anæmia that the disease is not steadily progressive, but is subject to temporary remissions. It may run its course in a few months, or may last for two years or even longer. There is not much difficulty in respect of diagnosis if attention be paid to the points I have already noted. Patients in the later stages of cancer of the stomach present much the same aspect as those suffering from pernicious anæmia, save the emaciation which is always marked in the former, while in the case of the latter the body may remain well-covered with fat. Free hæmorrhage is not an antecedent.

Cases of Addison's disease, before bronzing comes on, may much resemble essential anæmia. The liver and spleen are not manifestly affected or enlarged, nor are the lympharia.

Some patients suffering from essential anæmia have been supposed to be suffering from jaundice, in consequence of the peculiar tint of the body.

The disease is to be distinguished from chlorosis—which, of course, only occurs in females—by its history and progress, and by the changes in the blood, and no less by its resistance to treatment by iron, which is a sovereign remedy for chlorosis.

Patients suffering from an early stage of tuberculosis may sometimes become exceedingly anæmic. They tend, however, to waste and develop pyrexia.

Cases of syphilis, whether in an inherited or in an acquired form, may sometimes present signs of grave anæmia, which yield to mercury and not to iron.

It is only necessary to be aware of these several conditions to enable the differential diagnoses to be made.

Lastly, as to treatment. I have already told you that iron is of no avail in pernicious anæmia; the only drug that has proved of real service is arsenic. It must be used early, and freely pushed. Fowler's solution is, I believe, the best preparation, and the dose should be from four to twelve or fifteen minims thrice a day. It is well to leave off the remedy for two days in each week, so as to avoid all untoward symptoms of over-dosing. Another plan is to give arsenious acid in doses of one-twentieth of a grain in pill, with the same amount of strychnia and of phosphorus, three times a day. The dietary should be as nourishing and digestible as possible, and should include some full-bodied red wine.

The next therapeutic article I shall mention comes under the head of diet: I allude to marrow. This is best given in the form of marrow bones daily at one meal; or the marrow may be taken from the bones and served on toast. In the last case of true pernicious anæmia I had in my ward, I employed marrow in this fashion, and I met with the most satisfactory result. It was clear that it acted more efficiently than arsenic, phosphorus, or strychnia, and the patient rapidly formed healthy blood under its use, and made a complete recovery. I wish I could have had this last patient earlier under my care. Marrow is found very useful also in cases of Hodgkin's disease (lymphadenoma), and I can recommend a trial of it in that disease.

I should have mentioned that towards the end of an unchecked case of pernicious anæmia, the patient may become delirious and unconscious, developing a form of coma vigil. This condition occurred in this case.

(A post-mortem examination was refused by the family, and so we had no opportunity of increasing our knowledge in this direction, or of further certifying the diagnosis.)

Two Cases of Compound Depressed Fracture of the Skull treated by Trephining and Replacement of Bone.

By ANTHONY BOWLBY, F.R.C.S.

FOR the following notes, I am indebted to the dressers, Mr. Deck and Mr. Simmonds, and to the house-surgeons, Mr. Cross and Mr. Humphrey.

CASE 1.—Dennis D—, æt. 30, was admitted to the hospital on December 13th, 1894. He walked to the surgery and said that he had cut his head by falling down stairs, and it was not till after trephining had been done that it was discovered that

this story was quite untrue, the fact being that he had been struck on the head with a hammer during a family quarrel. The wound was situated high up in the left frontal region, at the margin of the hairy scalp, and Mr. Humphrey, on examining it with his finger, found that the bone beneath was fractured and depressed. I happened to be passing through the surgery at the time, and concluded that, although there were absolutely no symptoms of compression, the case was one to examine more thoroughly under an anæsthetic; so the head was shaved and washed, and the patient then removed to the theatre and anæsthetised. The wound was enlarged in an upward and backward direction and the fracture exposed, when it was seen that a circular piece of bone, the size of a shilling, was deeply depressed, the external table of the depressed piece being below the level of the surrounding inner table. The broken bone was fissured and bent downwards in its centre, but there were no loose fragments, and the depressed bone was so wedged and fixed in its abnormal position, that it could not be moved in the slightest degree. It was evident that this circle of bone corresponded to the size of the round end of the hammer which caused the injury, and that the fracture was of a punctured nature. As no elevator or forceps could be introduced, a portion of the sound bone was removed by trephining behind the area of depression, and some more bone had to be cut away with Hoffman's forceps before the depressed bone could be elevated or removed. After this had been done, it was found that the inner table had become detached from the diploë in thin flat plates with jagged edges, which were driven between the dura mater and the surrounding uninjured bone, and after a good deal of trouble they were all removed.

It was now seen that the dura mater was unhurt except for scratches on its surface, and after a few bleeding vessels had been ligatured, and the parts doused with perchloride lotion, the bone was replaced. As each piece was removed during the operation it had been placed in warm boracic lotion, and now the fragments were cut into portions, rather larger than a split pea, with parrot-bill forceps, and replaced over the exposed dura mater till the latter was nearly all covered. Such periosteum as had been saved was then drawn over the seat of fracture, and the edges of the contused skin-wound were pared off with scissors. The whole wound was then sutured, and dressed with iodoform and alembroth gauze, and the head covered with alembroth wool and a capelline bandage.

The patient made an uninterrupted recovery, the wound healing under a single dressing and there being no pyrexia throughout. In three weeks' time the area of operation felt quite as firm as the rest of the skull, and the patient left the hospital four weeks after his admission.

CASE 2.—Harry F—, æt. 5, was brought to the hospital with the following history:—He had been travelling with his parents, when the door of the railway-carriage opened and the child fell out. The train was travelling about thirty miles an hour, and as the "cord communication" with the guard did not work, it was almost twenty minutes before the carriage came to a stop at the next station. About an hour and a half had elapsed before the parents reached the seat of the accident, and they then found that a neighbouring signalman had taken care of the child, whom he found walking along the line, crying and covered with blood. A temporary dressing was applied by a surgeon, and the child was sent to the hospital about twelve hours after the accident. It was said that he had been several times sick, and had been drowsy, but on admission he was in no way unconscious. His limbs had escaped all injury, and were not even scratched. About two inches above the left eyebrow was a jagged wound an inch and a half long, leading down to fractured and depressed bone, but there was no other injury to the face, and no bleeding from the nose or ears.

The head was shaved and thoroughly cleansed, and the patient taken to the operating theatre and placed under the influence of chloroform. The wound was then enlarged upwards and backwards, and the cranium exposed. The fractured bone was very deeply depressed, but was rather bent than broken, maintaining its connection with the surrounding frontal bone. In order to elevate it, some of the surrounding bone was removed with Hey's saw and forceps, and then, on elevating the depressed portions, the latter broke up and had to be in great part removed. The dura mater was uninjured; the fragments of bone were replaced as in the first case. The wound was closed after cutting away the contused skin, and dressed with iodoform and alembroth gauze.

This patient also made an uninterrupted recovery, the only bad symptom being a rise of temperature to 101° on the third and fourth days, but this was apparently due to some stomach disturbance, and the wound healed by first intention.

The area of operation felt quite firm and bony in less than three weeks, and before his discharge, four weeks after the operation, the skull seemed to be quite soundly repaired.

I have not published these cases because there is anything very unusual in either the injuries or their results, but rather because they illustrate certain details of practice, some of which at least are of recent growth.

First: I think that in every case of compound fracture of the skull where the wound is small, it should be enlarged, under an anæsthetic, to a sufficient extent to expose and examine thoroughly the whole of the broken bone. The advantages of this are that the full extent of the lesion is discovered, as it would not otherwise be, and that the free incision gives opportunity for thoroughly cleansing the injured tissues, and for dressing and closing the wound, so as to promote its healing without suppuration. The cutting away of the bruised and generally dirty edges of the skin-wound is not the least important step in the treatment.

Second: It is advisable in all depressed fractures, to elevate or remove the depressed bone, whether there are symptoms of compression of the brain or not. It is, of course, true that many patients recover where this practice is not carried into effect, and it is also true that many text-books on surgery still lay down the rule that, in the absence of symptoms, and where there is no comminution, the fracture should be left alone. My objections to this practice are, in the first place, that the appearance of the bone externally is no sure guide to the condition of the inner table, and that the latter may be comminuted (as in my cases) without there being any external evidence that it is so. In the next place, it is now well known that the pressure of displaced bone on the cerebral cortex may cause trouble in after years, although there are no compression symptoms immediately or soon after the accident; and the elevation or removal of the depressed bone may prevent the subsequent development of either chronic headache or epilepsy. Lastly, the operation, if performed with ordinary care, entails no serious risks, and enables the surgeon to insure in a much more satisfactory way the complete asepsis of the injured tissues.

Third: The replacement of the bone, removed during operation, obviates most of the objections to the use of the trephine or saw, and is a thoroughly satisfactory practice. As this replacement of bone is comparatively a recent innovation in surgery, it is perhaps worth while to make a very few comments on the methods employed. With regard to the size of the fragments to be used, I would say that although it is quite true that the whole button removed by a trephine may be successfully replaced in a few cases, yet it is much less likely to survive than are smaller pieces, and that it offers no advantages over these. It is evident that numerous small pieces present much larger surface for blood supply and for nutrition by granulation tissue than does a single large piece, and experience has shown that the latter is therefore more likely to necrose; further, the diploë exposed in the small pieces offers a much better matrix for the growth of new blood-vessels than do the uncut inner and outer tables. It is not, however, very easy to cut up the cranial bones into the size required, except with Hoffman's forceps; parrot-bill forceps, nevertheless, do it very fairly well, if care be taken to keep them immersed in a bowl of lotion during use, so as to prevent the severed pieces of bone from flying off and being lost or soiled. Lastly, it is not necessary to cover in with the pieces of bone the whole of the exposed dura mater, and it is not necessary that the various opposed fragments should fit. All that is required is that the different pieces should be sufficiently in contact to support each other, and if any periosteum has been saved, it is as well to draw it over the replaced bone before closing the flap.

Notes.

DR. H. D. ROLLESTON will deliver the Goulstonian Lectures at the Royal College of Physicians on March 19th, 21st, and 26th. The subject is "The Suprarenal Capsules."

MR. A. E. SHIPLEY, M.A., has been appointed additional examiner in Zoology for Medical and Science degrees in the University of Edinburgh.

MR. B. G. SETON, I.M.S., has been promoted to be Surgeon-Captain from January 30th last.

AT THE COMPETITION for commissions in the Indian Medical Service, held last month, three Bart.'s men competed and two were successful, viz. R. F. Standage, who passed tenth with 2,250 marks, and G. E. Bensley, who passed seventeenth with 1,962 marks.

WE HAVE been requested to state that it has been decided to hold a *Conversazione* in the Great Hall of the Hospital and Medical School Buildings, to celebrate the Centenary of the Abernethian Society on May 1st, 1895. Any past or present members of the Society who desire to be present on the occasion should communicate with "the Secretaries of the Abernethian Society" before April 15th. A card of admission will be sent to those who apply, together with a ticket for *one* friend if desired.

WE HEAR that Mr. D'Arcy Power's new book on the "Surgical Diseases of Children and their Treatment by Modern Methods" is on the eve of publication. The publisher is H. K. Lewis.

WE WISH to emphasise the letter from the Abernethian Society published in this issue asking for the loan of "relics" of Abernethy for the *Conversazione*. Such a collection would be of very great interest, and lenders may rest assured that every care will be taken to prevent damage.

IT SEEMS that several of our readers read our description of the new Operating Theatre, which appeared in the February number, as if it applied to a Theatre which was *replacing* the old one. This is not the case. The new Theatre at the top of the Coborn block is a supplementary Theatre, built solely for the purpose of relieving the pressure in the old one.

WE WISH to draw attention to the "Editor's Box," recently fixed in the Smoking Room. This has been placed there for the reception of any news which may be thought of sufficient interest for insertion in the Journal. It is *not* intended, as men seem to think, for the reception of all the rubbish from the floor of the Smoking Room.

WE HAVE been asked to notice the candidature of R. T. Norman Vogan, æt. 9, for the Royal Medical Benevolent College at Epsom. He is the son of the late James Norman Vogan, F.R.C.S. Eng., who was House Surgeon and Assistant Electrician at St. Bartholomew's in 1884. His mother, who had been a nurse at St. Bartholomew's, died in 1887, and his father two years later, he being thus left quite unprovided for.

WE UNDERSTAND that the Royal Free Hospital (London School of Medicine for Women) Cycling Club has been invited to join the United Hospitals Cycling Club. The "Lady Medicals" are coming on without doubt. We wonder how long it will be before the words "Royal Free" are engraved on the Athletic Challenge Shield!

Amalgamated Clubs.

ASSOCIATION FOOTBALL CLUB.

FROST again prevented us from carrying out our fixtures for February, the only match played by the First Eleven being against London Hospital, in the Inter-Hospital Cup Competition. This match was played at Lower Edmonton on February 28th, when we qualified for the semi-final by beating London Hospital by eight goals to one. St. Thomas's Hospital having beaten King's College by six goals to one, we have now to play them in the semi-final.

RESULTS FOR FEBRUARY.

				GOALS.
				For Agst.
Sat., Feb. 23.	Old Cholmeleians	at Edmonton	11	1
Thurs., " 28.	—London Hosp. (Hosp. Cup)	" "	8	1

FIXTURES FOR MARCH.

Sat., Mar. 2.	—St. Albans	at St. Albans.
Wed., " 6.	—St. Thomas's Hospital (2nd)	" Edmonton.
Thurs., " 7.	—Casuals	" Leyton.
Sat., " 9.	—Old Wilsonians	" Edmonton.
" " 9.	—Enfield F. C.	" Enfield.
Wed., " 13.	—St. Mary's (Southampton)	" Southampton.
Sat., " 16.	—Ealing	" Ealing.
" " 16.	—St. John's College (Leatherhead)	" Leatherhead.
Wed., " 20.	—Wren's A. F. C.	" Away.
Sat., " 23.	—Harrow Athletic	" Harrow.
" " 23.	—Forest School	" Walthamstow.
" " 30.	—Minerva.	" Edmonton.

RECORD UP TO DATE.

	Played.	Won.	Drawn.	Lost.	GOALS.
					For Agt.
First Eleven	21	12	5	4	65 33
Second Eleven	19	12	5	2	67 31

Saturday, Feb. 23.—ST. BARTHOLOMEW'S HOSPITAL v. OLD CHOLMELEIANS.

Played on our ground at Edmonton. The ground was in a very bad state, owing to the thaw after the hard frost. Pickering kicked off for us, and within a very few minutes, from a pass by Wrangham, a goal was scored by Whitaker. The Old Cholmeleians then played up hard and secured a good goal, but not before Bart.'s had added another to their score. After this the Old Boys fell to pieces, and at half-time the score stood five goals to one in Bart.'s favour. After crossing over Bart.'s still had the best of it, the only feature of note being two good runs by Hay, who scored at the end of each by completely outpacing his opponents. Pickering at forward also was seen to great advantage, four of our goals being due to him. Four more goals were scored before time was called, and the game ended in Bart.'s favour by eleven goals to one.

The goals were scored by Pickering 4, Hay 2, Waterhouse 2, Pope 2, Whitaker 1.

Team.—E. H. B. Fox, goal; C. H. Turner, C. G. Watson, backs; W. Wrangham, J. C. Marshall, L. E. Whitaker, half-backs; T. D. Dawson, R. Waterhouse, right wing; H. J. Pickering, centre; A. Hay, W. H. Pope, left wing.

INTER-HOSPITAL CUP TIE.

Thursday, Feb. 28.—ST. BARTHOLOMEW'S HOSPITAL v. LONDON HOSPITAL.

Bart.'s had choice of ground, and not being able to get Leyton, the match was played on our own ground at Lower Edmonton. The ground was in very fair condition, but was rather greasy in some parts.

Shortly after 3 o'clock Green kicked off for London Hospital against the wind, and Bart.'s almost immediately assumed the aggressive. Very soon Fernie placed us ahead by a good shot, and shortly afterwards London attacked our goal, and Green equalised, amidst cheers from the London men present. Bart.'s again pressed, and Hay and Fryer both scoring, the game stood at half-time three goals to one in our favour.

On resuming, London, who had the advantage of the slight wind at their backs, could make no headway, and the game resolved itself into a bombardment of their goal, and but for the fine goal-keeping of H. G. Taylor-Jones the score would have been much heavier against them. As it was Woodbridge (1), Fernie (1), and Robinson (3), all added to the score, and the game ended in Bart.'s being victorious by eight goals to one.

TEAMS.

St. Bart.'s.—E. H. B. Fox, goal; R. P. Brown, L. E. Whitaker, backs; W. H. Pope, C. C. Costin, H. J. Pickering, half-backs; A. Hay, C. A. Robinson, right wing; J. F. Fernie, centre; E. H. Fryer, E. W. Woodbridge, left wing.

London Hospital.—H. G. Taylor-Jones, goal; G. Hutcheson, E. J. Andrews, backs; S. J. Welch, J. E. Palser, E. C. Salts, half-backs; J. L. Sykes, W. Bannerman, right wing; P. A. Green, centre; H. F. B. Williams, F. T. Waldron, left wing.

Referee.—Mr. C. W. de Lyons Pike.

Linesmen.—Messrs. Williams (London) and Fisher (Bart.'s).

The following Cup Ties have been played:

First Round.

University College beat St. Mary's 5 goals to 2
Rest Byes.

Second Round.

St. Bartholomew's beat London 8 goals to 1
Middlesex " Charing Cross 2 " 0
St. Thomas's " King's 6 " 1
Guy's versus University to be played.

The semi-finals are—

St. Bartholomew's v. St. Thomas's, Wed., March, 13th, at Leyton.
Middlesex v. Guy's or University.

RUGBY FOOTBALL CLUB.

Owing to the frost, many of our fixtures have had to be scratched, viz.:

Portsmouth, at Portsmouth.....	Jan. 12.
R.M.A., at Woolwich	Jan. 26.
Northampton, at Northampton	Feb. 9.
Ealing, at Ealing	Feb. 16.
East Sheen, at Richmond	Feb. 20.

The result of our match with the Old Cheltonians, which was played at Richmond on January 19th, was a win for us by 3 tries (9 pts.) to nil.

Our match with the United Services, which was to have been played on February 27th at Portsmouth, was scratched on account of the Cup Tie.

FIRST ROUND v. ST. THOMAS'S HOSPITAL.

Although somewhat unfortunate in being drawn against Thomas's in the first round of the Cup Ties, we, on Thursday, February 28th, proved conclusively that Bart.'s were no ordinary nut to crack. By drawing with our formidable rivals, after an unusually exciting and even game, we seem to have regained some of those Rugby glories which we possessed "long since but lost awhile." Nearly 1,500 spectators, mostly students, amongst whom were several ladies, assembled on the Richmond Athletic Ground. The day was perfect, and the turf, which was well covered, in splendid condition. A slight breeze and rather an annoying sun must have caused some inconvenience to our opponents, who had lost the toss. Brown kicked off for them, but the game had scarcely begun before it was apparent that our forwards were rather more than a match for those of our rival. (And here I would digress for a moment to note what an improvement the new jerseys are. Besides looking much cleaner, they do not dwarf the men as did the old black or dirty-green.) The game at once settled down in the Thomas's half, and gradually scrum after scrum forced the ball back to their goal-line amid the frantic yells and cheering of Bart.'s, who had a great phonetic advantage. For some ten minutes Thomas's were fairly hemmed in, any attempts to break away being promptly frustrated by Wilson and Maturin. Then, however, a disaster occurred. From a loose scramble Greg picked the ball up and was off like a streak, making tracks for the Bart.'s goal. A heartrending "Oh!" went up from our men lining the touch-lines, quickly changed to loud cheers when it was seen that Mason, our champion sprinter, had caught and downed Greg on our "25" line. Our joy was, however, short-lived, as almost immediately, and before many of the Bart.'s forwards had got up, Rotheram snapped the ball up, passed to Thorman, and he to Greg again, the last-named winding up a brilliant piece of play by a try nearly under the posts—a try which Rotheram neatly converted into a goal. From the kick-off Bart.'s, in no way disconcerted, at once rushed the leather down the field, and it looked any odds on our scoring. The forwards were playing a sterling game, and Maturin at half was here, there, and everywhere at the same time. Nothing further was scored up to half-time, although Thomas's had to touch down in self-defence.

On re-starting Bart.'s again pressed; but Thomas's were now playing a better game, and operations were soon transferred to our

part of the field, where Adair-Thompson nearly scored. Maturin relieved with one of his celebrated screw kicks. Rotheram soon afterwards dribbled over our line, and we had to touch down to save a try. Andrew kicked off, and Bart's following up strongly, the return by Moggridge was charged down, and a scrum took place on Thomas's twenty-fifth line. The ball being well heeled out was received by Maturin, who, with a judicious kick, sent it over the line, while he himself was quickly after it, scoring a try for Bart's about half-way between the goal and touch-line. Taking the kick at a difficult angle Maturin converted his try into a magnificent goal, amid the most intense excitement. The game now became more breathless than ever, especially as most of it took place perilously near our goal. The tackling, however, was most sure, Ridout, Cruddas, Nunn, and Body especially distinguishing themselves. For some infringement right in front of our goal Thomas's were given a free kick, which Adair-Thompson ought certainly to have landed, but, much to our joy, failed to do so. The game shortly afterwards came to an end, with the result of a goal each. For us Maturin was simply superb; time after time he saved breaks away, and brought relief by kicks, which invariably found touch, most ably backed up by all the team, especially Wilson, who continually kept the forwards well together, and occasionally acted as an extra half. The three-quarters collared well, which was all they were asked to do, and Body, who naturally suffered from comparison with Bond, was reliable at back, and when he knows where to stand will, no doubt, give an excellent account of himself. Bond, unfortunately, was suffering from a severe attack of influenza, and could not play.

TEAMS.

St. Thomas's.—C. F. B. Moggridge (back); E. W. Browne, A. H. Greg, W. H. Thorman, B. G. Patch (three-quarters); A. Rotheram, A. Montague (halves); A. E. Elliott, A. A. Rouillard, F. C. Adair-Thompson, G. H. Dominy, H. R. Sedgwick, F. M. Bingham, L. Gilbert, and A. N. Other (forwards).

St. Bart's.—T. H. Body (back); J. W. Nunn, C. S. Ridout, J. C. S. Dunn, S. Mason (three-quarters); F. H. Maturin, A. Hawkins (halves); P. O. Andrew (captain); R. P. Wilson, H. M. Cruddas, A. J. W. Wells, W. F. Bennett, A. L. Ormerod, J. K. S. Fleming, F. G. Richards (forwards).

Referee.—Mr. G. H. Harnett (Hon. Sec., Kent County R. F. A.).

Touch judges.—H. Marshall (Bart's); W. Ashford (Thomas's).

Since the above report was written the following results have come to hand:

St. Bart's v. St. Thomas's (Rugby).—St. Thomas's 1 goal and 2 tries, *St. Bart's nil*.

St. Bart's v. St. Thomas's (Association).—St. Bart's 12 goals, *St. Thomas's nil*.

Abernethian Society.

FEBRUARY 14th, 1895.—The fourteenth Ordinary Meeting of the Society was held, the President, Mr. Maidlow, being in the chair. Mr. Maxwell showed a case of "molluscum fibrosum." Dr. Kanthack then read a paper on "Tetanus, and what it Teaches."* He first dealt with the aetiology and progress of the disease, and then with the general and, more especially, the antitoxin treatment. Cultures and microscopic specimens of the bacillus were shown, also a mouse injected about twenty-four hours previously with the pure culture.

The attendance was very large, over sixty members being present.

February 21st, 1895.—The fifteenth Ordinary Meeting of the Society was held. The Vice-President, Mr. Sloane, being in the chair.

Mr. Keown first showed a case of "congenital flexion of both elbow-joints." The patient was a boy, *æt. 12*. At birth both elbows were fully flexed and fixed by adhesions; some of these had been broken down under an anæsthetic, and now the angle between the arms and forearms was rather greater than a right angle.

Dr. Morrison next showed a case of "chancere of the eyelid." The patient was a girl, *æt. 3*. On the 15th of December last patient was knocked down by a horse, and both lids of the right eye were lacerated. The father sucked the wound to clean it, and it healed up all but a small pimple, which appeared and gradually spread. On going into the history of the case it was found the father attended at the hospital in July, 1894, with a sore on the penis and an extensive secondary rash. He attended until October, 1894, when, considering himself cured, he ceased to attend.

* The Society will shortly publish this paper in pamphlet form.

Mr. Maxwell then showed a case of a man *æt. 38*, a hawker, who, in 1893, had a "suppurating corn" under the right great toe, which healed after twelve months. The sore formed was deep. Ten months ago he struck his right great toe, and since that time the toe has enlarged, taking two months to reach its present size. At the same time he received a severe shock. Twelve months ago he had another suppurating corn under the left great toe, which lasted eight months. He now has enlargement of the metatarso-phalangeal joints on either side, together with osseous enlargement of the phalanx of the right great toe, Argyll-Robertson pupils, and loss of knee-jerks, but no ataxia, inco-ordination of movements, or history of true lightning pains. There is no loss of sensation, and micturition is normal. There is no evidence or history of syphilis.

Dr. Atlee then showed (i) a case of a woman, *æt. 48*, with xanthoma planum of both upper eyelids; typical case; duration ten years; associated with sick headaches all the time, never jaundiced. (ii) Daughter of above, *æt. 10*. The anterior pillars of the fauces are attached to the base of the tongue very far forwards indeed. Also there are two small crypts at the juncture of the hard and soft palate; aetiology, &c., unknown.

The Vice-President then called upon Mr. Maidlow to read a paper upon "Biblical Syphilis."

Mr. Maidlow, in opening his subject, advanced the following propositions:

1. Granting absolute inspiration of Bible, was there any reason why any passages obscure to modern thought might not be discussed or applied to modern meaning?

2. If allegority was to explain such, the burden of proof lay on these alleging allegority.

3. Granting it is wrong to even mention in ordinary language such inspired meanings, a tolerant would not attack the critic, only the criticism.

4. As a matter of fact the Bible must be looked upon as an ancient book with many obscure passages, and from a medical point of view should be searched for present diseases, as one would in Hippocrates, or Galen.

After mentioning antiquity of syphilis as being prehistoric, although not definitely mentioned in old writings, and could only be inferred, he went on to note that *circumcision* was more probably the remains of some sacrificial rite than primarily an institution for prophylaxis or cleanliness. He quoted cases to support this.

Then, in order—

Case of Sarah, who left in Egypt a disease inferred of genital nature, and again at Gerar when some plague fell because of her on the court of Abimelech. He mentioned also her long sterility and Abraham's fertility. The story was held to show an analogy with the more modern custom of imputing syphilis to a rival nation.

The plague or botch of Egypt, threatened by Moses on evil doers, was held to denote syphilis, emorods or hæmorrhoids signifying condylomata.

The plague of emorods at Ekron, after capture of the ark was held to mean syphilis and not leprosy; the virulence of the outbreak being attributed to the new soil.

Chap. xiii Leviticus, v. 18, denotes a scar of, or a present "hard sore."

The disease of Baalpeor, which smote those Israelites who mingled with the Midianites, was explained to be probably syphilis, Baalpeor being the equivalent of Priapus in Rome and Phallus of Asia, Phallic worship being existent to the present day.

Quotations to support this pathology were given from Hosea, Numbers, and Joshua. The plague slew the sinners; it was a plague from immorality. Moses made supreme efforts to stop it by slaying adult Midianite women. The disease nevertheless persisted unto the next generation even, and Moses never made such efforts for leprosy.

Some verses of Isaiah in chap. iii were also held to denote syphilis, and indications also in Proverbs v.

The writer did not think any of the *plagues* of Egypt, except perhaps the sixth, were syphilis.

Job's disease was either scurvy or Aleppo boil. The potsherd was compared with Volkmann's spoon.

Herod died of intestinal obstruction rather than from phagedenic ulceration.

The paralytics of the New Testament, although told to sin no more, might have had paralysis from many causes, and sinners are numerous too.

The ulcers of Lazarus were most likely varicose.

The case of congenital blindness in John ix, 2, cured by clay and spittle and subsequent washing, was suggested to be of congenital origin and corneal, either ophthalmia neonatorum or interstitial keratitis.

David's case was then quoted. Evidence rested upon—

1. His sin and its merited deserts. His notorious uxoriousness.
2. The early death of Bathsheba's infant.
3. His allusions to his condition, many of which might be taken to mean syphilis, in the Psalms.

A brisk discussion ensued, which took a religious turn.

Mr. T. Preston Maxwell said that while believing in the Bible from beginning to end he did not think that there was any harm done by the discussion of a question of this kind. He would like, however, to make one or two remarks about some points raised in Mr. Maidlow's paper. (i) The passage in Genesis xx, about the plugging of Abimelech's court. Mr. Maidlow thought that Sarah might have infected the whole court. He thought that he had forgotten to read verse 4, and it was not scientific to comment on one part of this passage and leave out that which upsets the theory, for assuredly if "Abimelech had not come near her" she could not have infected the court.

Again, referring to John ix, v. 6, Mr. Maidlow made the clay put on the eyes of the blind man the means of his cure. Might he point out to him that in addition to this he had to exercise faith in going to the Pool of Siloam and washing. Again, he would like to ask Mr. Maidlow if he knew of a case in which a woman, having had syphilis in sufficient virulence to infect a whole court—as Mr. Maidlow inferred Sarah did,—had born a child, which lived to puberty, and was not weakly either in mind or body. He might remind him that Sarah's son, Isaac, died at the age of 180, while his mother died at the age of 127.

Mr. Josiah Oldfield then said that syphilis was a subject of which he knew nothing, and therefore could not criticise the pathology contained in the paper. He thought it, however, a pity such a paper had been read, as it must of necessity in the minds of those present link syphilis with some of the most beautiful passages of scripture whenever in future life they heard those passages read.

Dr. Atlee then rose and said, as a believer in God and the Bible, and a member of the Abernethian Society, he considered Mr. Maidlow's paper extremely childish and frivolous. He went on to speak of the improbability of a woman, supposed to have had syphilis so virulently as Sarah, bearing a child such as Isaac. He considered that it was taking an extremely narrow view to interpret the verse, "My tongue clave to the roof of my mouth," to mean specific glossitis. He also criticised Mr. Maidlow's views upon the "botch of Egypt."

Mr. Buttar said that he thoroughly approved of the greater part of Mr. Maidlow's paper. He thought that Sarah must be taken rather as a type of the Jewish woman of that day and not as a special individual.

Dr. Morrison said that he thought such a paper should not have been read, because it was eminently so unscientific. He thought it extremely improbable that Sarah, looking at her from Mr. Maidlow's point of view, should straightway have born a healthy child, without previously having had several abortions.

Mr. E. W. Cross thought the speakers had been unnecessarily hard upon Mr. Maidlow. He thought the paper had been extremely interesting, and the theories well worked out and supported.

Mr. T. A. Barron said he thought the attacks upon Mr. Maidlow had been very virulent. He said that the Abernethian Society was a medical and scientific society, and that syphilis was eminently a medical subject, therefore he saw no reasons why the paper should not have been read. He said it was a pity that the ultra-theologians always thought it necessary to harangue their audiences so violently.

Messrs. Giles, Thorne-Thorne, Brigstock, Pearson, Beadles, and Grace-Calvert also spoke on the subject.

In conclusion and in reply Mr. Maidlow maintained that he should be pleased if he had led any to see things in a new light, and had provoked a spirit of inquiry. For himself he saw no reason why a paper on Biblical syphilis should be evidence that he denied the Bible or was irreligious; that he had by no means found syphilis in all Biblical diseases, as had been imputed to him; and that he had not written on leprosy or tubercle because he had written on syphilis, and that the Bible and syphilis were compatible. Whether his inferences were correct or not he could not maintain, as there must of course be as much difficulty in unravelling Bible language as that in Hippocrates or Galen. He deprecated abuse of the critic of religion rather than of the criticism. He concluded with the quotations—

"Fiat justitia, ruat cælum;" and
"Magna est veritas, et prævalebit."

The attendance was extremely large, nearly seventy members being present.

St. Bartholomew's Hospital Smoking Concert Club.



THE fourth concert of the season was held on Saturday, February 2nd, in the French Room, St. James's Hall Restaurant. The programme, which was an excellent one, was arranged by Messrs. D. L. E. Bolton and C. E. Hogan, the Hon. Secs.

Mr. P. O. Andrew, the new chairman of the Club, ably fulfilled his onerous duties. The programme was opened with a pianoforte solo by Mr. J. Edgar, which was well rendered. Mr. W. W. Giblin then sang in fine style "Out on the Deep." Mr. G. Forman gave some excellent banjo solos and songs, and was encored. His place was taken by Mr. J. K. Birdseye, who sang the "Amateur Fireman." We have seldom seen him in better form, his acting being quite up to professional style. Mr. Rees then gave a clever ventriloquial entertainment, entitled, "The Talking Hand," and his clever knot-tying tricks were exceedingly smart. Mr. Frank Lane sang "The Judge," and, in response to the unanimous encore, "That's his Girl." Mr. J. W. Nunn was heard to advantage in "Loch Lomond" and "Doughty Deeds."

Mr. T. Cowperthwaite met with a flattering reception, receiving an encore for his song, "The Bay of Biscay." One of the features of the evening were the instrumental varieties given by Mr. S. Gibson, who is an expert with musical instruments innumerable. Mr. D. Welch, who is an old favourite with the Club, sang "Her Golden Hair was hanging down her Back," and, as an encore, "Then we had another one." Mr. D. L. E. Bolton sang "Nancy Lee" and "The Gallant Fusiliers" in fine style, the audience joining lustily in the choruses. Mr. P. Leslie next gave "I'm one of the J's," and "Twixt Love and Duty." A very pleasant evening was brought to a close by singing "Auld Lang Syne" and "God Save the Queen." We noted with pleasure that the attendance was a great deal better than last time. The presence of the Medical Staff Corps in uniform, just from the mobilisation of the forces in the great march-out in defence of London against an imaginary invading force, was a feature of the assemblage. Amongst those who were present we noticed Messrs. Marsh and Berry, and Dr. Calvert.—"ONLOOKER."

Argon.



LAST summer, at the meeting of the British Association at Oxford, the scientific and medical world received a rude shock by the preliminary communication from Lord Rayleigh and Professor Ramsey that they had isolated an hitherto unsuspected element from atmospheric air. Every schoolboy knows that the air is mainly composed of nitrogen and oxygen, in the proportions of 79 of the former to 21 of the latter—facts for whose discovery science is indebted to Priestley and Scheele; but no one appears to have even suspected the existence of the new body—argon—which has been shown to be present to the extent of 1 per cent. When the announcement of "argon's" existence was first made, chemists were somewhat sceptical, and naturally reserved their judgment until more facts were before them. After six months' further investigation Lord Rayleigh and Professor Ramsey have made a further and fuller communication of their discovery, and have more than established the results of their preliminary note. And the scene at the meeting of the Royal Society on January 31st last, when the large theatre of the University of London was crowded with scientific *savants*, eager to hear the arguments and experiments as to "argon," was one which will not easily fade from the memory of those whose privilege it was to be present. It appears that if air having an

excess of oxygen be subjected to a series of electric sparks, the resulting nitrous fumes absorbed by potash and the excess of oxygen by alkaline pyrogallate, there remains a body which is neither oxygen nor nitrogen, which has a distinct spectrum, and is, in fact, the hitherto unsuspected argon. The discovery of the new gas is a triumph of physical science—for it is to the physicist and not the chemist that we owe it. It was first observed that nitrogen obtained by chemical processes has an appreciably less density than that obtained from atmospheric air, and other explanations failing, the experimenters were driven to conclude that atmospheric nitrogen contains another substance—a conclusion in accord with Cavendish, who, in the early days of chemical discovery, was not satisfied that “phlogisticated air” (nitrogen) was pure. A long series of experiments at length enabled Lord Rayleigh and Professor Ramsey to isolate the new element, and the best way to prepare it on a large scale is to free air from oxygen by means of red-hot copper; then, after drying, the nitrogen is removed by passage through a combustion tube containing magnesium turnings. The residual gas is argon, having a density of 19.09 to 20. Viewed through the spectroscope, argon has a distinct and characteristic series of bands, not possessed by any known substance. As to its other properties, it is about as soluble in water as oxygen is, and can be solidified at a temperature of 189.6°. It is remarkably inert, refusing to combine with other elements or compounds, having, for example, no affinity for hydrogen, chlorine, phosphorus, sulphur, &c.—in fact, so remarkable is its inertness that the authors call it *ar*, privative; *εργον*, energy—contracted to “argon.”

Of late, science has made rapid strides, but the discovery which has just added to our knowledge of so commonplace a substance as the air we breathe is one which must rank as a first-class advance in science, and equal to the classical work of Cavendish, Lavoisier and Priestley.

Meeting of the Anatomical Society at St. Bartholomew's.

A VERY successful meeting of the Anatomical Society of Great Britain and Ireland was held at “Bart.’s,” on Wednesday, February 13th, at 4 p.m. After assembling in the library, where tea was provided, and where Professor Sherrington exhibited some microscopical specimens showing the sensory fibres in the sixth lumbar nerve of the *Macacus rhesus* (= fifth lumbar of man), the formal meeting took place in the Anatomical Theatre. Professor D. J. Cunningham presided, and amongst those present we noticed Sir George Humphry, Professor Thane, Professor Weldon, Professor Sherrington, Professor Howes, Mr. F. G. Parsons, Mr. Walsham, Dr. Shore, Mr. Waring, Dr. Flemming, and many others. Several students were present as visitors. The following specimens were shown and papers read, the last two being illustrated by lantern slides:

Specimens:

- DR. HUBERT HIGGINS: The Semilunar Fibro-cartilages and Transverse Ligament of the Knee-joint.
- MR. F. G. PARSONS: Possible Sternalis in *Bathyergus*.
- PROFESSOR WARDROP GRIFFITH: A case of Congenital Malformation of the Heart (specimen shown).
- PROFESSOR D. J. CUNNINGHAM: Series of Crania (from the Haddon Collection), exhibiting wounds produced by stone implements.

Papers:

PROFESSOR D. J. CUNNINGHAM: *Pithecanthropus erectus*: The man-like transitional form of Dr. Eugene Dubois.

PROFESSOR SHERRINGTON: Remarks on the Distribution of the Sixth Lumbar Nerve in *Macacus rhesus*.

Examinations.

N. C. BEAUMONT, C. R. BROWN, A. G. Ede, H. Goodman, S. B. Green, and A. J. W. Wells have passed the Preliminary Scientific (M.B.) in Chemistry and Physics.

J. J. S. SCRASE and S. Stevens have passed the Preliminary Scientific (M.B.) in Biology.

H. C. P. BENNETT and R. P. Brown have passed the Intermediate M.B.Lond.

J. L. MAXWELL has passed in the same Examination exclusive of Physiology.

S. F. SMITH, H. Mundy, C. Riviere and W. Wrangham have passed in Physiology only.

W. J. GILLESPIE has passed in Surgery at the final L.S.A.; G. Lowley has passed in Forensic Medicine, and A. H. Wade has passed in Midwifery.

O. F. PAGET has been admitted to the degrees of M.B. and B.C. of the University of Cambridge.

Correspondence.

To the Editor of St. Bartholomew's Hospital Journal.

DEAR SIR,—Desiring to confute some statements in a recently-read interesting paper at the Abernethian Society, I came upon some important points, which, if the author of the paper in question is ignorant of—which I doubt—he will thank me for. In the first place, there is, as is agreed in the Church, much doubt about the authorship of the Psalms. I must be brief: anyone can look up the question for verification. The only Psalms which nearly all agree to be Davidic are 1—51. (2) Psalm 38, the one most quoted from, is well within this range. (3) The date given is B.C. 1021, the date of possible disease is B.C. 1037, or sixteen years previously. (4) It is the 3rd penitential Psalm. (5) The great Scott Bible has this commentary (abstracted): (a) It is either great trouble of mind, which he compares to disease. (β) It is actually disease. “It is probable.” Why should it not be β? Sin was great, punishment deserved—a likely kind. Disease is from heaven or from whence? My desire was to confute, but I cannot, and am

UNBIASED.

To the Editor of St. Bartholomew's Hospital Journal.

DEAR SIR,—*Apropos* of two recent cases of advertising, brought by the Council before the medical profession, I saw one case in which a medical man of some standing, at least according to his own idea, advertised in the following manner: Covering the whole front of his house, or rather shop, were some eight or nine texts, the most striking of which were the following: “And the man departed and told the Jews that it was Jesus which had made him whole,” and “Without the shedding of blood there is no remission of sins.” Does not this seem rather an arrogation of divine power, to say nothing of the contemptible way in which he evades the laws of our profession with regard to the advertisement.—Believe me, yours truly,

NO BIBLICAL SCHOLAR.

[We feel disposed to regard this as symptomatic rather of insanity than of anything else.—Ed.]

To the Editor of St. Bartholomew's Hospital Journal.

The Abernethian Society, St. Bartholomew's Hospital,

February 26th, 1895.

DEAR SIR,—As most of your readers are aware, the Abernethian Society are celebrating their centenary on Wednesday, the 1st of May next. The committee are anxious to collect any relics of the great surgeon under whose name the Society exists, and exhibit them on the evening of the centenary. Will any of your readers possessing such, who are willing to lend them to the Society, kindly communicate with the Secretaries.—We remain, yours very truly,

ASHLEY BARREN,
FRANK A. SMITH, } Hon. Secs.

Obituary.

SIR WILLIAM SCOVELL SAVORY, BART., F.R.S.—It is with the deepest regret and grief, which we are sure all Bart.'s men will share, that we learn of the sudden and wholly unexpected death of one of St. Bartholomew's most worthy sons, Sir William Savory. He was attacked with influenza a day or two before his death, but previous to this he was subject recently to some nervous symptoms, and had been much distressed by the death of Mr. Hulke, the President of the College of Surgeons. On February 21st, he first consulted Dr. Habershon about these nervous symptoms, and subsequently saw Dr. Pavy. On February 28th, he last visited St. Bartholomew's Hospital, and looked unwell and anxious. There had been cases of influenza in his house, and on the morning of Friday, March 1st, his temperature, which previously had been normal or subnormal, was raised to 100° 8'. He then took to bed, and Sister John, who had previously nursed Sir William's grandson through a serious illness, went as nurse. On the day following, symptoms of a slight bronchitis supervened, but these were at no time severe. Up to then his strength had been well maintained, and on Sunday morning, March 3rd, he was reported better. In the course of the day, however, signs of prostration and cardiac failure appeared, but yielded to stimulation, and by the evening the temperature was lower and the pulse stronger. Early on the morning of Monday, March 4th, the temperature rose to 103°, and sudden and alarming collapse set in, and in spite of the most active remedial measures Sir William gradually sank, and died at 10.20 a.m. During his illness he was attended by Dr. Pavy and Dr. Habershon, who state that never at any time was there any bronchopneumonia, and the bronchitic symptoms appear to have been "of the nature of a profound vaso-motor paralysis."

To us and to many of his colleagues at St. Bartholomew's the news of his death came as a painful surprise, as we had not even heard that he was ill.

Sir William Savory, who was the son of Mr. W. H. Savory, a merchant, was born in London, near Tower Hill, in 1826, and immediately after leaving school entered as a student of St. Bartholomew's in 1843, the year in which the residential College was founded, and Sir James (then Mr.) Paget was appointed the first Warden. He became a Member of the College of Surgeons in 1847, and in 1848 took the degree of M.B. of the University of London, and at the same time gained the "University Scholarship" in Medicine. Shortly afterwards he became House Surgeon to Sir William Lawrence, and in 1852 was admitted a Fellow of the Royal College of Surgeons. As a student Sir William was most diligent in his attendance on lectures and practical work. He was Dresser to Sir William Lawrence, and Clerk to Sir George Burrows. From his student days he was an orator and keen debater, and took a leading and active part in the discussions of the Abernethian Society, of which at one time

he was President. His abilities and industry were at once recognised by his teachers, and after being House Surgeon, he soon joined the teaching staff of St. Bartholomew's as Demonstrator of Anatomy. In 1859 he succeeded his former teacher, Sir James Paget, as Lecturer on Physiology, and on April 24th, 1861, he became Assistant Surgeon to the Hospital. After six years' service as Assistant Surgeon he became full Surgeon, which office he held until November, 1891, when he retired, and was elected Consulting Surgeon to, and a Life Governor of the Hospital. In 1869 he became Joint Lecturer on Surgery, with the late Mr. Coote as his colleague. Ten years later, in 1879, on the death of Mr. Callendar, he became sole Lecturer on Surgery, which post he resigned in 1889, being succeeded in the Lectureship by Mr. Willett and Mr. Marsh.

As a lecturer Savory particularly excelled. His lectures were always clear and lucid, and his language was elegant and polished, which, with a delivery, distinct and impressive, made them most pleasing to listen to; and no one of those who had the privilege of being present will easily forget the large and attentive audience of past and present students who flocked to listen to the charming oratory of his last lecture on surgery, which he gave in the Anatomical Theatre in March, 1889.

In the earlier part of his career on our Hospital Staff Savory spent much time in our splendid pathological museum, and we owe much of what is best in it to him. He wrote, in 1862, a volume of "Addenda" to Sir James Paget's Catalogue of 1846-51.

As a surgeon he was a skilful and careful operator, and could work equally well with left or right hand; in diagnosis he was rapid and good, and in his results he compared favorably with others. As a clinical teacher he was not so popular as many of his colleagues, for in his visits to the wards he said little, but taught rather by precept and example. Anyone who chose to watch carefully all Savory *did*, and to think about and reason for himself from what he saw, could learn many golden truths and form his own rules of practice. Thus his teaching was of little use to the ignorant, but was of especial value to his House Surgeons and to advanced and sharp students. The certain degree of firmness and severity which characterised him, his keen glance, and his impressive and dignified demeanour made all students respect him—many feared him. But he was kind, sensitive, and modest, and, though he had no sympathy for the unpunctual and the lazy student, was ever willing to help and encourage the industrious, hard-working, or nervous one.

Sir William Savory took a prominent part in the proceedings of the Royal College of Surgeons, for in 1877 he became a member of the Council, and continued in office until 1893. In 1885 he was elected President, and—unprecedented honour—was re-elected a second, a third, and a fourth year, so unique was the esteem with which he was

held and so highly valued and rare were those qualities which stamped him as a clear, logical, and dignified chairman.

At the meeting of the British Medical Association at Cork, in 1879, Sir William delivered the address on Surgery, on "The Prevention of Blood-poisoning in the Practice of Surgery;" for, though the great opponent of Listerism, he was a thorough advocate of asepticism in surgery, and many of the opinions and predictions which he enunciated have since been proved true. Although a thorough enthusiast in science, Savory was not a large writer of books, but what he did write is characterised by such sound argument and clear and expressive language as to have become classical. Such are his lectures, delivered at the Royal Institution, on "Life and Death," and his "Essays on Pyæmia." In his early life he contributed papers on scientific subjects to the *Proceedings of the Royal Society* and the *Philosophical Transactions*, amongst which were, in 1851, "On the Valves of the Heart," and "The Development of the Striated Muscle in Mammalia" in 1855. In 1858 he published his well-known work on "An Experimental Enquiry into the Effect on the Mother of Poisoning the Fœtus."

He became a Fellow of the Royal Society in 1851, was for many years Professor of Comparative Anatomy at the College of Surgeons, and in 1887 delivered his famous "Hunterian Oration" to the College. Many of his best writings are to be found in the earlier volumes of *St. Bartholomew's Hospital Reports*, such as those on pyæmia, thrombosis, local effects of blood-poisoning in relation to embolism, phlebitis, and necrosis. He wrote also the chapters on "Hysteria" and "Scrofula" in *Holmes's System of Surgery*.

Since his retirement from active service on the Staff of our Hospital, Sir William had not been idle. He was a member of the Royal Commission on Vaccination, and of the Royal Commission on the proposed Gresham University for London, a subject in which he took the keenest interest. At his death he was a member of the Senate of the University of London, and Surgeon Extraordinary to Her Majesty the Queen; and as a fitting reward for his high sterling qualities and honest industry, he received the honour of a baronetcy, after having declined lesser honours.

In 1854, Sir William Savory married a daughter of Mr. William Borradaile, but his domestic life was not without sadness, for in 1867, having poisoned his finger, he transmitted the infection to Mrs. Savory, who dressed it. The disease proved fatal to her, and he himself nearly died from its effects. He leaves one son, Borradaile Savory, the Rector of St. Bartholomew's the Great, who is married to a daughter of Dr. Pavy, and succeeds him in the baronetcy. The funeral took place on Thursday, March 7th, at Highgate, preceded by a service at St. George's, Hanover Square, where a large congregation of his personal friends and colleagues attended.

DANIEL HACK TUKE, M.D., LL.D.—We regret we have to record the death of Dr. Hack Tuke, whose name is so well known in connection with mental disease. Dr. Tuke was born at York in 1827, and in 1852 became a Member of the College of Surgeons after studying at St. Bartholomew's. He was editor of the *Journal of Mental Science*, and Lecturer on Psychological Medicine at Charing Cross Hospital. He was formerly Physician to the Retreat, York, President of the Psychological Association, and Examiner in Mental Physiology at the University of London. He wrote largely on mental science, amongst his works being *Influence of Mind on the Body*, *Insanity in Ancient and Modern Life*, and *A Dictionary of Psychological Medicine*. He died on March 5th from influenza.

Appointments.

HUGO, J. H., M.R.C.S., L.R.C.P., has been appointed Extra Assistant Medical Officer to the East Dulwich Infirmary.

CALVERLEY, J. E. G., M.R.C.S., L.R.C.P., has been appointed Assistant House Physician to the Metropolitan Hospital.

We regret that an error occurred in the Appointment List published last month, by which it appeared that N. P. Marsh, M.B. Lond., M.R.C.S., had been appointed House Physician to the Children's Infirmary, Liverpool. Dr. Marsh was re-appointed Honorary Physician—a post which he has now held for some years.

Births.

HENDLEY.—On Feb. 23rd, at Dharmasala, India, the wife of Surgeon-Captain Hendley, I.M.S., D.P.H., of a daughter.

JESSOP.—On Feb. 24th, at Fitzjohn's Avenue, N.W., the wife of E. Jessop, L.R.C.P., M.R.C.S., of a daughter.

STEVENS.—On Feb. 27th, at Tulse Hill, S.W., the wife of A. B. Stevens, M.B., of a daughter.

Marriages.

BATEMAN—METCALFE.—On Feb. 6th, at York, Hinton E. Bateman, L.R.C.P., M.R.C.S., to Edith Beatrice, second daughter of the late Rev. J. Metcalfe, Rector of Holy Trinity, Micklegate, York.

POWELL—DAVIES.—On Feb. 20th, at Swansea, T. M. Jones Powell, M.B.Lond., to M. Beatrice Davies, daughter of Joseph Davies, F.R.C.S., J.P., Hafod, Swansea.

Deaths.

SAVORY.—On March 4th, at Brook Street, W., Sir William Savory, Bart, F.R.S., in his 69th year.

TUKE.—On March 5th, at Welbeck Street, W., Daniel Hack Tuke, M.D., LL.D., F.R.C.P., aged 68 years.

ACKNOWLEDGMENTS.—*Guy's Hospital Gazette*. *London Hospital Gazette*. *St. Mary's Hospital Gazette*. *Case of Angina Pectoris*, by William Wylls, M.R.C.S., L.R.C.P. *A Visit to a Norwegian Leper Hospital*, by E. Mansel Sympson, M.D.